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## SECTION 02669 - FIRE SERVICE MAINS AND HYDRANTS

### PART 1 - GENERAL

#### 1.1 RELATED DOCUMENTS

- A. Drawings and general provisions of Contract, including General and Supplementary Conditions and Division 1 Specification Sections, apply to this section.

#### 1.2 SUMMARY

- A. This section includes private fire protection service mains and appurtenances from the source of water to a point 1.5 meters (5 feet) outside the building.
- B. Related Sections: The following sections contain requirements that relate to this section:
  - 1. Division 2 Section "Earthwork" for excavation and backfill required for fire service mains and structures.
  - 2. Division 2 Section "Water Service Piping" for domestic water service piping and appurtenances.
  - 3. Division 2 Section "Storm Sewerage" for storm drainage connections to pit drains.
  - 4. Division 3 Section "Concrete Work" for supports and thrust blocks.

#### 1.3 SUBMITTALS

- A. General: Submit the following in accordance with Conditions of Contract and Division 1 Specification Sections.
- B. Product data for valves and fire hydrants.

#### 1.4 QUALITY ASSURANCE



- A. Comply with local fire department/marshal standards pertaining to materials, hose threads, and installation.

#### 1.5 DELIVERY, STORAGE, AND HANDLING

- A. Preparation for Transport: Prepare valves, including fire hydrants, for shipping as follows:
  - 1. Ensure valves are dry and internally protected against rust and corrosion.
  - 2. Protect valves against damage to threaded ends, flange faces, and weld ends.
  - 3. Set valves in best position for handling. Set gate valves and fire hydrants closed to prevent rattling.
- B. Storage: Use the following precautions for valves, including fire hydrants, during storage:
  - 1. Do not remove end protectors unless necessary for inspection; then reinstall for storage.
  - 2. Protect valves from weather. Store valves indoors. Maintain valve temperature higher than the ambient dew point temperature. If outdoor storage is necessary, support valves off the ground or pavement in watertight enclosures.
- C. Handling: Use a sling to handle valves, including fire hydrants, whose size requires handling by crane or lift. Rig valves to avoid damage to exposed valve parts. Do not use handwheels or stems as lifting or rigging points.

#### 1.6 SEQUENCING AND SCHEDULING

- A. Coordinate with interior fire protection piping.
- B. Coordinate with other utility work.



## PART 2 - PRODUCTS

### 2.1 MANUFACTURERS

- A. Available Manufacturers: Subject to compliance with requirements, manufacturers offering products that may be incorporated in the Work include but are not limited to the following:
  - 1. Dry-Barrel Fire Hydrants:
    - a. Kennedy Valve; Div. of McWane, Inc.
    - b. Mueller-Hersey; A Grinnell Co.

### 2.2 PIPE AND PIPE FITTINGS, GENERAL

- A. Pipe and pipe fitting materials shall be in compliance with Section 02668 - Water Service Piping.

### 2.3 FIRE HYDRANTS

- A. General: Cast-iron body, compression-type valve, opening against pressure and closing with pressure, 150mm (6-inch) mechanical joint inlet, 1.03 MPa (150-psi) working pressure.
- B. Outlet Threads: NFPA 1963, external hose thread used by the local fire department. Outlets shall have cast-iron caps with steel chains.
- C. Operating and Cap Nuts: Pentagon 40mm (1-1/2-inch) point to flat.
- D. Direction of Opening: Hydrant valves shall be opened by turning operating nut to the left, or counterclockwise.
- E. Finish: Red exterior alkyd gloss enamel paint.
- F. Dry-Barrel Fire Hydrants: AWWA C502, two 63mm and one 113mm (2-1/2- and one 4-1/2-inch) outlets, 130mm (5-1/4-inch) main valve, drain valve, and 150mm (6-inch) mechanical joint inlet.



G. Hydrants shall be traffic breakable.

H. Contractor shall provide two fire hydrant wrenches to the Owner.

#### 2.4 FIRE HYDRANT INSTALLATION

A. AWWA-Type Fire Hydrants: Comply with AWWA M17. Install with gate valve and provision for drainage as indicated.

END OF SECTION 02669

